Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at http://about.jstor.org/participate-jstor/individuals/early-journal-content.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

THE BOTANICAL GAZETTE

THE UNIVERSITY OF CHICAGO PRESS
CHICAGO, ILLINOIS

THE CAMBRIDGE UNIVERSITY PRESS
LONDON AND EDINBURGH

THE MARUZEN-KABUSHIKI-KAISHA
TOKYO, OSAKA, KYOTO, FUKUOKA, SENDAI

THE MISSION BOOK COMPANY
SHANGHAI

THE
BOTANICAL GAZETTE

EDITOR
JOHN MERLE COULTER

VOLUME LXVII

JANUARY–JUNE 1919

WITH EIGHTEEN PLATES AND FIFTY-FIVE FIGURES

THE UNIVERSITY OF CHICAGO PRESS
CHICAGO, ILLINOIS

Published
January, February, March, April, May, June, 1919

Composed and Printed By
The University of Chicago Press
Chicago, Illinois, U.S.A.

TABLE OF CONTENTS

		PAGE
Oenothera rubrinervis, a half mutant	*Hugo De Vries*	1
Notes on American willows. III. A conspectus of American species and varieties of sections Reticulatae, Herbaceae, Ovalifoliae, and Glaucae	*Camillo Schneider*	27
Morphology of the genus *Actinomyces*. I	*Charles Drechsler*	65
Protomarattia, a new genus of Marattiaceae, and *Archangiopteris* (with plate I and three figures)	*Bunzo Hayata*	84
Blister canker of apple trees; a physiological and chemical study. Contributions from the Hull Botanical Laboratory **246** (with ten figures)	*Dean H. Rose*	105
Morphology of the genus *Actinomyces*. II (with plates II–IX)	*Charles Drechsler*	147
Relation of minimum moisture content of subsoil of prairies to hygroscopic coefficient	*F. J. Alway*, *G. R. McDole*, and *R. S. Trumbull*	185
Notes on North American trees. IV	*C. S. Sargent*	208
Possible correlations concerning position of seeds in the pod	*Byron D. Halsted*	243
Embryo and seedling of *Dioon spinulosum* (with plates X, XI)	*Sister Helen Angela Dorety*	251
Development of *Stropharia epimyces* (with ten figures)	*W. B. McDougall*	258
After-ripening and germination of seeds of *Tilia*, *Sambucus*, and *Rubus*. Contributions from the Hull Botanical Laboratory **247**	*R. C. Rose*	281
Notes on American willows. IV. Species and varieties of section Longifoliae	*Camillo Schneider*	309
Respiration after death (with three figures)	*A. R. C. Haas*	347
Effect of anesthetics upon respiration (with seven figures)	*A. R. C. Haas*	377

PAGE

Basis of succulence in plants - - - *D. T. MacDougal*, *H. M. Richards*, and *H. A. Spoehr* 405

A coniferous sand dune in Cape Breton Island (with eight figures) - - - - - - - - - *LeRoy H. Harvey* 417

Embryo sac and embryo of *Pentstemon secundiflorus*. Contributions from the Hull Botanical Laboratory 248 (with plate XII) - - - - - - *Arthur T. Evans* 427

Structure, development, and distribution of so-called bars or rims of Sanio (with plates XIII–XV) - *I. W. Bailey* 449

Apospory in *Pteris sulcata* L. (with plates XVI, XVII, and four figures) - - - - - - *W. N. Steil* 469

Hydrogen cyanide fumigation. Contributions from the Hull Botanical Laboratory 249 (with two figures) - - - - - - - - - - *E. E. Clayton* 483

Studies of some Porto Rican fungi (with plate XVIII) - - - - - - - - - - *Leo R. Tehon* 501

BRIEFER ARTICLES—

Byron D. Halsted (with portrait) - - - - - *Mel. T. Cook* 169

Hybrid perennial sunflowers - - - - - - *T. D. A. Cockerell* 264

Relationships within the Rhodosporeae - - - *Geo. F. Atkinson* 266

George Francis Atkinson (with portrait) - - - *H. H. Whetzel* 366

Depressed segments of oak stems (with four figures) *I. W. Bailey* 438

Importance of epidermal coverings (with two figures) *R. B. Harvey* 441

CURRENT LITERATURE - - - - - - 93, 171, 268, 369, 445, 512

For titles of book reviews see index under author's name and reviews

Papers noticed in "Notes for Students" are indexed under author's name and subjects

---

DATES OF PUBLICATION

No. 1, January 18; No. 2, February 15; No. 3, March 18; No. 4, April 18; No. 5, May 19; No. 6, June 21.

ERRATA

VOL. LXVI

P. 468, legend fig. 1, for 9, *Abies canadensis* read 9, *Abies balsamea*

P. 469, line 10 from bottom, for *Abies canadensis* read *Abies balsamea*

P. 524, line 7 from bottom, for SCHIMPER read SCHIFFNER

VOL. LXVII

P. 73, line 7 from top, for LITMAN read LUTMAN

P. 82, line 18 from top, for contact read contrast

P. 83, line 4 from bottom, for successfully read successively

P. 149, line 14 from bottom, for 20 μ read 2.0 μ

P. 160, line 20 from top, for XVI read XVII

P. 164, citation 4, for 1891 read 1892

P. 186, line 6 from bottom, for brought read drought

P. 216, last word line 1, for *virginiana* read *virginica*